

## SOCIAL AMENITY MANAGEMENT Air Quality Management Plan

Objective	<p>To:</p> <ul style="list-style-type: none"> <li>• Ensure that statutory requirements and corporate standards are met;</li> <li>• Manage the operations in a way that minimises air quality impacts to environment and neighbours, and limits interference to mining production;</li> <li>• Minimise dust generation from mining activities;</li> <li>• Review emissions from operations against model predictions and modify activities to ensure limits are not exceeded; and</li> <li>• Keep the local community and regulators informed of activities where required and respond quickly and effectively to issues and complaints.</li> </ul>																																								
Scope	<p>HVO Environmental Protection Licence boundary, including:</p> <ul style="list-style-type: none"> <li>• Pits</li> <li>• Rehabilitation Areas</li> <li>• CPPs</li> <li>• Loading Points</li> </ul>																																								
Key Environmental Issues	<p>Air quality impacts as a result of construction, operational, and rehabilitation activities that may affect:</p> <ul style="list-style-type: none"> <li>• Communities (Warkworth, Maison Dieu, Jerrys Plains, Bulga);</li> <li>• Residences within zone of affectation;</li> <li>• Residences beyond zone of affectation; and</li> <li>• Public roads.</li> </ul>																																								
Performance Criteria	<p><i>Impact Assessment and Acquisition Limits</i></p> <table border="1" data-bbox="456 1223 1422 1771"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th colspan="2">Concentration</th> </tr> </thead> <tbody> <tr> <td colspan="4"><i>Long term acquisition criteria for particulate matter</i></td> </tr> <tr> <td>TSP</td> <td>Annual</td> <td colspan="2">90 µg/m<sup>3</sup></td> </tr> <tr> <td>PM<sub>10</sub></td> <td>Annual</td> <td colspan="2">30 µg/m<sup>3</sup></td> </tr> <tr> <td colspan="4"><i>Short term acquisition criteria for particulate matter</i></td> </tr> <tr> <td>Total PM<sub>10</sub></td> <td>24 hour</td> <td colspan="2">150 µg/m<sup>3</sup></td> </tr> <tr> <td>Incremental PM<sub>10</sub></td> <td>24 hour</td> <td colspan="2">50 µg/m<sup>3</sup></td> </tr> <tr> <td colspan="4"><i>Long term acquisition criteria for deposited dust</i></td> </tr> <tr> <td></td> <td></td> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> <tr> <td>Deposited Dust</td> <td>Annual</td> <td>2 g/m<sup>2</sup>/month</td> <td>4 g/m<sup>2</sup>/month</td> </tr> </tbody> </table>	Pollutant	Averaging period	Concentration		<i>Long term acquisition criteria for particulate matter</i>				TSP	Annual	90 µg/m <sup>3</sup>		PM <sub>10</sub>	Annual	30 µg/m <sup>3</sup>		<i>Short term acquisition criteria for particulate matter</i>				Total PM <sub>10</sub>	24 hour	150 µg/m <sup>3</sup>		Incremental PM <sub>10</sub>	24 hour	50 µg/m <sup>3</sup>		<i>Long term acquisition criteria for deposited dust</i>						Maximum increase in deposited dust level	Maximum total deposited dust level	Deposited Dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month
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<p><b>Control Measures</b></p>	<p>General control measures include:</p> <ul style="list-style-type: none"> <li>• Environmental inductions to ensure employee awareness;</li> <li>• Minimising the area of disturbance;</li> <li>• Applying water to active exposed areas as required by weather conditions at the time; and</li> <li>• A program of regular monitoring.</li> </ul> <p><i>Construction</i></p> <p>Control measures include:</p> <ul style="list-style-type: none"> <li>• Leaving areas vegetated until construction commences.</li> </ul> <p><i>Operation</i></p> <p>Control measures include:</p> <ul style="list-style-type: none"> <li>• Progressive rehabilitation; and</li> <li>• Restrictions on clearing, topsoil stripping and access to disturbed areas.</li> </ul> <p><i>Adverse Weather</i></p> <p>Should adverse weather conditions exist, the following options will be considered to mitigate off-site, private property impacts:</p> <ul style="list-style-type: none"> <li>• Review of the elevation of mining and dumping and, where possible, relocate equipment to lower elevations, until more suitable conditions return;</li> <li>• Amended working hours;</li> <li>• Temporary cessation of work within an area; and</li> <li>• Construction of a temporary or long-term dust mitigation bund to shield the mining operation.</li> </ul>
<p><b>Monitoring and Inspection</b></p>	<p><i>Monthly Monitoring</i> (as set out in the Air Monitoring Manual)</p> <ul style="list-style-type: none"> <li>• Deposited dust</li> <li>• Particulate dust (PM<sub>10</sub>)</li> <li>• Total suspended particulates</li> </ul> <p><i>Model Validation</i></p> <ul style="list-style-type: none"> <li>• Every 2 years comparing monitoring data to modelling predictions.</li> </ul>
<p><b>Incident Management</b></p>	<p><i>Incident Reporting</i></p> <p>Incident reporting as per CNA Environmental Procedure <i>Incident Management and Reporting</i> (EP1.8).</p> <p><i>Complaints Management</i></p> <p>Complaints management as per CNA Environmental Procedure <i>Communications</i> (EP1.9).</p> <p><i>Incident Response – Exceedance or Complaint</i></p> <p>Investigate event and identify equipment locations, timing and climatic conditions to determine if additional management measures are required.</p>

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<p><b>Performance Reporting</b></p>	<p>Reporting in Annual Environmental Management Report of:</p> <ul style="list-style-type: none"> <li>• Monitoring results</li> <li>• Complaints</li> <li>• Performance against implementation of control measures.</li> </ul>
<p><b>Definitions</b></p>	<p><i>Adverse Weather</i> - Weather effects that occur at a site for a significant period of time that enhance dust (that is, wind occurring more than 30% of the time in any assessment period in any season).</p> <p><i>Deposited Dust</i> - Particles which are collected in a deposit gauge and which pass through a 1 mm mesh sieve.</p> <p><i>PM10</i> - Particulate matter with equivalent aerodynamic diameter of 10 µm.</p> <p><i>TSP</i> - Total suspended particulate (matter).</p>
<p><b>Key Documents</b></p>	<p><i>Development Consents</i> DA 450-10-2003 – Conditions 4.3 to 4.6; DA 114-12-98 – Condition 6.1; and DA 215/97 – Conditions 12 and 13.</p> <p><i>Licences</i> EPL 640.</p> <p><i>EMS Documents</i> RT Environment Standard <i>Noise and Vibration Control</i> (V1.0); CNA Environmental Standard <i>Noise and Vibration Management</i> (ES9); CNA Environmental Procedure <i>Noise</i> (EP9.1); CNA Environmental Procedure <i>Communications</i> (EP1.9); and CNA Environmental Procedure <i>Incident Management and Reporting</i> (EP1.8).</p> <p><i>Forms</i> CNA Ground Disturbance Permit; and CNA Environmental Risk Assessment Checklist.</p>